

ADDITIONAL FEE

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R E M A R K S

The Office Action issued November 3, 2008 has been received and its contents have been carefully considered.

Responsive to the objection to the specification on pages 2-4 of the Office Action, applicants respectfully call attention to the Preliminary Amendment filed concurrently with this application which sets forth the appropriate headings in the specification as well as an Abstract of the Disclosure.

The format of claims 1 and 27 have been amended to comply with the Examiner's requirement on page 4, section 2 of the Office Action.

All the claims of this application have been rejected under 35 USC §103 as being unpatentable over two or more of the following references:

U.S. Patent No. 4,561,545 to Carlow

U.S. Patent No. 5,167,141 to Carrara

U.S. Patent No. 6,311,919 to Hermanns et al.

U.S. Patent No. 5,621,591 to Rahimi et al.

These rejections are respectfully because the sorting devices of Carlow and Carrara do not include an electromagnetic actuator of the type specifically recited in applicants' independent claims 1 and 27, and since the patents to Hermanns et al. and Rahimi et al. do not relate to conveyor sorters at all.

The present invention relates to an actuating device for a conveyor sorter having the following elements:

1. A first pair of permanent magnets located in a first position;
2. A second pair of permanent magnets located in a second position, with the magnetic fields of the second magnets extending in the opposite direction from the magnetic fields of the first pair of magnets.
3. An actuator lever which is rotatably suspended about a pivot and has an energizable coil that moves between the first position and the second position, depending upon the direction of current in the coil.

The two patents, Carlow and Carrara, which relate to products moving on a conveyor belt, fail to teach or suggest the use of an actuating device of this type.

Carlow is directed to a sorting apparatus conveying articles through an inspection station. The articles may be potatoes as it is described in column 9, line 64, to column 10, line 5. The apparatus, as shown in Figure 2, has a conveyor RC conveying the articles in the direction of the arrow A. At the end of the conveyor belt RC, the articles fall down either into a conveyor LC or a conveyor TC. A ramp actuator RSA is selectively actuated so that the corresponding ramp RS, which is connected to the actuator RSA, directs the potatoes to the conveyor belt TC.

Carrara describes a device for testing and withdrawing seals from manufacturing moulds. As shown in Figure 1, this device has a conveyor 14 conveying seals 2. Furthermore, a deflector 34 is positioned overhead of the conveyor 14. This deflector 34 comprises a vertically mobile plate 40 which can be lowered by an electromagnetic actuator 42 in order to withdraw the parts from the conveyor belt 14. This deflector 34 has a spring 41 to bring the plate 40 back to its home position. As with Carlow, no mention is made of an actuator of the type recited in applicants' claim 1.

The two remaining references, Hermanns et al. and Rahimi et al., are directed to fields of endeavor which are not at all analogous to that of the present invention.

Consequently, a person skilled in the art would not be inclined to turn to these references for knowledge in providing an actuator for a conveyor.

Hermanns et al. describe a yarn guide imparting a traversing motion to yarn being delivered to a rotationally driven take-up bobbin in a textile yarn winding operation to create a cross-wound bobbin. According to Figures 1 and 2, the position of the yarn on the bobbin is guided by a yarn guide 6. The yarn guide 6 is secured to a shaft 7 and can be turned to the left side or to the right side around the shaft 7. This actuation is done by an electromechanical drive mechanism which is shown in one embodiment in Figure 6. This drive mechanism is described in column 9, line 42, to column 10, line 11.

This yarn guide therefore belongs to another, non-analogous field and does not sort anything.

The patent to Rahimi et al. is directed to a head-arm assembly having a pair of trapezoidal-like shaped coil bobbins for improved torque and moments of inertia in a voice coil motor (VC) for a disk drive. Several embodiments of such an actuator are described. This reference is also directed to another technical field which has nothing to do with the field of sorting materials.

The patentability of the present invention has to be viewed from the standpoint of a person of average skill in the conveyor art at a time at which the invention was made.

This person would presumably be a mechanical engineer, working in the field of designing machines, for example devices for sorting different materials with the aid of a conveyor belt. More particularly, these devices are preferably of the type for sorting reusable materials from waste products, also including metal waste or scrap.

If such a person wished to improve such devices according to the then present state of the art, he/she surely would not look for solutions in the field of disc drives or media players because he/she would be of the opinion that parts of these devices (such media players or disc drives) are much too delicate (or lightly constructed or fragile or susceptible for breakdown) for adaptation or application in rough environments in which the devices according to the invention are used, so that these devices according to the state of the art would not work for long periods of time.

Consequently, it is submitted that a person skilled in the art would not combine devices according to Hermanns et al. and/or Rahimi et al. with Carlow or Carrara, because

these references are from entirely different technical fields.

A person skilled in the art working in the field of constructing devices for sorting different materials with the aid of a conveyor belt and with an electromagnetic actuator, in particular for sorting metal pieces and metal parts (scrap), would not look for solutions in respect to different objects, starting from the closest state of the art, in the field of textile yarn winding devices or in the field of disc drive units. These devices are used in nearly clean environments or under very low environmental loads compared with the field of use of the device according to the invention. In contrast, the inventive device is used at scrap yards in very rough conditions.

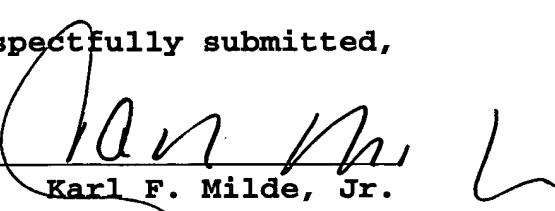
A person skilled in the art would be of the opinion that he/she would not achieve success by finding solutions for a particular objective in looking in the above-mentioned technical fields which are far and away from sorting devices that use a conveyer belt.

Accordingly, it is believed that independent claim 1, as well as independent claim 27 which tracks the language of claim 1, distinguish patentably over all of the references of record. Since all of the remaining claims of this

application are dependent, either directly or indirectly, from claim 1, this application is believed to be in condition for immediate allowance. A formal Notice of Allowance is accordingly respectfully solicited.

Respectfully submitted,

By


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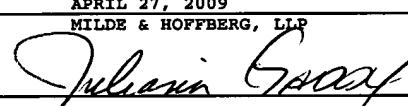
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